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AUTHOR Seals, Georgina; And Others
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ABSTRACT

This guide explains how to incorporate a local area network (LAN) into the business education curriculum. The first section defines LAN, a communications system that links computers and other peripherals within an office or throughout nearby buildings and shares multiuser software and send and/or receive information. Curriculum planning considerations are discussed, followed by a discussion of four levels where networking is used in the curriculum: individual classes, electronic processes to network classes, networked systems incorporated in other classes and/or other schools, and curriculum support of school administration needs. The introductory course outline consists of two sections: (1) Introduction to Electronic Communications--basic communication skills, communication modes, and applied communications; and (2) LAN Software Functions--electronic mail, electronic filing, electronic calendars/scheduling, and electronic conferencing. Student application exercises are described next. They cover the following topics: (1) Electronic Mail--messages, memoranda/business notes, and document suggestions; (2) Electronic Filing, (3) Electronic Calendaring, and (4) Electronic Conferencing. Five appendixes are included: selected list of 78 publications; list of 103 simulations by publishers; 9 computer activities (banking and finance); Sports Spectrum electronic files; and proposed software using Sports Spectrum flow-of-work simulation. (NLA)

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THE BUSINESS EDUCATION LAB AND LOCAL AREA NETWORKING FOR CURRICULUM IMPROVEMENT

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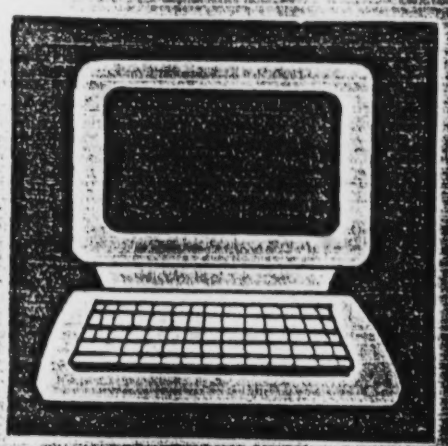

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WRITTEN BY:

Georgina Seals

Mary Walter

Fayth Simantel

Phyllis Lambert

Cathy Witte

Steve Reder

Claudia Jensen

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THE BUSINESS EDUCATION LAB AND
THE LOCAL AREA NETWORK FOR CURRICULUM IMPROVEMENT

I. LAN--Local Area Network

A. Definition

1. What it is:

A local area network (LAN) is a communications system that links computers (includes micros, minis, and/or mainframes), terminals, secondary storage devices, printers, and other peripherals within an office or throughout several nearby buildings.

2. What it does:

A local area network (LAN) has the capability to share multi-user software and send and/or receive information with just a few keystrokes. Other features include records management through electronic storage and retrieval, scheduling and calendaring, and telecommunications.

B. Business and Industry Trends

1. An officer worker spends at least 60 percent of the time communicating (orally and written activities) with others; an executive spends over 75 percent of the time communicating with others.

2. The numbers of electronic workstations installed are as follows:

a. In 1980, the ratio was seven to one.
b. In 1985, the ratio was three to one.
c. By 1990, the projection is two to one and may reach one to one.

NOTE: By 1990, an electronic workstation, as powerful as a machine costing 20 times a manager's annual salary in 1970, will be put on the manager's desk for less than 5 percent of that individual's salary.

3. A total of 1/3 of all office costs lies in the preparation, duplication, handling, and storage of paper.

a. A total of 80 percent of the material typed is repetitive.
b. One out of four typewritten documents is revised.
c. The average length of a letter is 175 words.
d. Although Dartnell Institute of Business Research puts the cost of business letters at $8-$9, a more realistic figure is in the $20-$50 range per original page (see INFOSYSTEMS, June 1986, page 49, "Electronic Document Interchange").

e. In keyboarding a document, 2/3 of the time is spent inputting and 1/3 editing.
f. Individuals keyboard original rough draft material on electric typewriters at equal or higher rates than those using electronic keyboards.

4. It costs 30/22 cents (Canada/USA) to send a four-page document across either country and takes a few days; whereas, 50 pages can be transmitted at night in seconds over the telephone lines for the same cost.

   a. Over 65 percent of all business correspondence is within the country (internal).
   b. Hard copy internal mail delivery time is three to four days.
   c. More than 75 percent is distributed within 600 feet.
   d. Ninety percent of all information is distributed within 1/2 mile.
   e. Hard copy out-of-country external mail delivery time is six to seven days.
   f. Fewer than one out of 100 documents are distributed electronically.

5. There are a number of concerns related to telephone usage.

   a. One out of four calls is a connect call.
   b. Fifty percent of all telephone calls are one way.
   c. Setting up a meeting of eight people takes between 20 to 30 telephone calls (can be accomplished in five minutes with electronic mail).
   d. Telephone calls average about six to nine minutes.
   e. Approximately 1/2 the time spent in a telephone conversation is business-related.
   f. There is no record of what transpired in a telephone conversation.
   g. The typical local business telephone call is $7.46.

      1) Telephone costs for the above are 32 cents.
      2) Labor represents the remainder--$7.14.

6. Teleconferencing has barely tapped its potential.

   a. There are about 200 million telephones in Canada and the United States.
   b. Over 75 billion dollars are spent annually by Canadian and United States' companies to transport people to meetings and conferences.
   c. At least 10 percent of today's business trips can justifiably be replaced with audio teleconferencing without installing sophisticated electronic equipment or requiring technical training.
   d. The cost of a face-to-face meeting (using most or all of one day) is at least 15 times that of an audio teleconference, assuming the same amount of time is devoted to business matters.

7. Unless we find alternative means to capture and retain information, we will be literally buried by paper.

   a. More than 23,000,000,000,000 (trillion) pages of paper are now stored in Canada and the United States.
   b. The 20,000,000 (million) office workers in Canada and the United States are creating new documents at the rate of 1,000,000 (million) per minute--4,000 per office worker per year.
   c. On the average, each office worker files ten pieces of paper every day, for a daily total of 2000,000,000 (million) pages--That's over 48,000,000,000 (billion) pages per year.
   d. Typically, 19 copies are made of a document; 12 are stored, five are accessed, one within the year.

8. In micrographic form, 14 million characters can be stored for the same cost as a single character in computer memory:

   a. Or 240 characters in micrographic form for one on magnetic disk.
   b. Or 4.5 million characters in micrographic form for one on hard copy.
   c. Micrographics reduces filing labor by 50 percent.
   d. COM is justified at volumes of 90,000 to 100,000 pages per month.

9. The cost allocation of business telecommunications for a typical organization is as follows:

   a. Voice transmission is 10 to 20 percent.
   b. Data transmission for computer processing is 2 to 10 percent.
   c. Text/document transmission represents 75 to 80 percent.

10. Office costs:

   a. Communications costs can be reduced through LANs, PBX, and alternative wide area networks.
   b. Currently, computer logic costs drop 25 percent annually.
   c. Electronic memory costs are falling at 40 percent annually.
   d. Office labor costs increase 8 to 10 percent annually.
   e. The true cost of an employee to an organization is generally twice the annual salary.
   f. For each $6,000 of annual salary, an individual earns a nickel per minute.

11. Indicators from business that justify the need for LAN:

   a. Employees handwrite documents.
   b. Turnaround time for document creation exceeds one working day.
   c. Many repetitive documents are being done on equipment without electronic storage.

d. Heavy report generation, requiring two or more revisions, is being done on electric and electronic typewriters.
e. Manual processing of information system function; e.g., filing, retrieving, and transmission of documents in hard copy format and mathematical calculations that have to be rekeyed into an electronic system.
f. Poor quality documents (image/content).
g. Information not available when needed.
h. Increased communication costs.
i. Manually summarizing information from computer printouts.

NOTE: Above Business and Industry Trends compiled by:

Bill Mitchell, Professor
Office Automation Consultant
University of Wisconsin-Eau Claire
Eau Claire, WI 54701
(715) 836-4320

C. Program Implications

1. Business Education classes will reflect state of the art technology and produce a more qualified workforce.

2. The curriculum will emulate business workflow patterns and electronic system procedures and will keep students on the cutting edge with business and industry.

3. The LAN will provide an environment to enhance basic skills in communication, time management, decision making, and critical thinking.

4. The LAN will provide an environment for students to develop desirable work ethics and refine personal skills such as integrity, trust, dependability, and responsibility.

5. The LAN will allow for a better coordinated curriculum between math and English course competencies and those taught in an applied Business Education class.

6. LAN will provide a means for all vocational programs to share the electronic processes of the network in a well-defined student competency-based program.

7. LAN can serve as the vehicle to connect high school and community college programs for competency articulation.

D. Components of a LAN

1. Hardware. Systems usually consists of a server (the main computer)--usually with a hard disk--that stores software and controls the networking functions. The server is usually connected to the workstations by cabling.

2. Workstations. Workstations run the software and provide access to various peripheral devices. Application software is down-loaded from the server to the workstation. Material may be stored on the server or on floppy disks.

3. System or networking software. The system software makes the network run. Examples of system software include Novell Advanced Netware, Corvus Constellation, and PC Network. The system software moves data between the network and disk drives, controls data access, file or record-sharing, and may include electronic mail.

4. Application software. This software includes instructional management programs for the teacher, word processing, spreadsheet programs, and other business-oriented software.

NOTE: Make sure all software is networkable prior to purchase.

E. Facilities

1. Location. Most Business Education classrooms may be arranged to accommodate a LAN.

2. Layout. Existing furniture may be used; however, tables designed specifically for the network will allow for hidden cabling, adequate workspace, proper table height, and equipment security.

3. Other considerations. Electrical wiring may need to be changed, room security added, and/or system backup provided.

F. Resources

1. List of publications (Appendix A).

2. List of simulation (Appendix B).

3. Labor Market Information--Contact Nancy Hargis, Executive Director, Oregon Occupational Information Coordinating Council, Employment Division, Salem, Oregon 97310, 503-378-8146.

4. Oregon Department of Education--Contact Claudia Jensen, Specialist, Business, Office and Marketing, Division of Vocational Technical Education, 700 Pringle Parkway SE, Salem, Oregon 97310-0290, 503-378-3590.

5. Publishing companies.

6. Computer hardware companies.

II. Curriculum Planning Considerations

A. Identify Goals, Objectives, Budget, and Staff Needs for Short- and Long-Range Plans

1. Five-year--Long-range.

2. Three-year--Short-range.

3. One-year--Current planning.

B. Identify Inservice and Curriculum Planning Needs/Requirements.

1. Curriculum planning and development for LAN integration into the classroom.

2. Staff development:

a. Training on the system.
b. Training on the software.

C. Develop Assessment and Evaluation Plans.

1. Program

2. LAN components

3. Staff

4. Student outcomes (competency-based education)

III. How to Use Networking in the Curriculum

A. Level One--Individual Classes

1. Accounting

a. Spread sheet (payroll, financial reports)
b. Filing (customer accounts)
c. Calendaring (report filing/payments due)
d. Personal data
e. Banking and finance (see Appendix C)

2. Business communications

a. Word processing/text processing (mail merge, sort, spelling verification)
b. Electronic mail (messaging)
c. Time management (calendaring, to do lists)
d. Electronic filing

3. Marketing

    a. Database--mail merge
    b. Calendaring--to do lists

4. Office procedures/machines

    a. Word processing/text editing
    b. Calendaring/to do lists
    c. Electronic mail/messaging
    d. Electronic filing
    e. Electronic calculations/spreadsheet
    f. Database
    g. Document distribution

5. Keyboarding/typing

    a. Word processing/text editing
    b. Calendaring
    c. Document distribution
    d. Electronic filing of documents

6. Word processing

    a. Document creating
    b. Editing/revision
    c. Electronic filing
    d. Document distribution
    e. Mail merge
    f. Sort
    g. Spelling verification
    h. Desk management

7. Work experience

    a. Calendaring/to do lists
    b. Scheduling/time management

B. Level Two--Electronic Processes Used to Network Classes

    1. Electronic mail

    2. Electronic filing

    3. Document and information sharing/transfer

    4. Equipment sharing

C. Level Three--Incorporate Networked Systems into Other Classes and/or with Other Schools

    1. Set up system security/user access.

2. English courses

    a. Create documents
    b. Word processing
    c. Edit documents
    d. Composition

3. Social Studies courses

    a. Create documents
    b. Edit documents

4. Math courses

    a. Create documents
    b. Computer application
    c. Data analyses
    d. Problem solving

5. Science

    a. Create document
    b. Edit documents
    c. Computer application
    d. Data base management

6. Other courses

    a. Create document
    b. Word processing
    c. Spelling verification
    d. Edit document

D. Level Four--Curriculum Support of School Administration Needs

1. Set up system security/user access.

2. Office practice--Create data base for counselors/attendance office.

3. Advanced Shorthand--Take dictation for word processing/electronic shorthand.

4. School bookkeeper--Accounting.

5. School inventory--Computer applications (database)

6. Work experience--School administrative offices (electronic messaging/document sharing).

E. Implications of Networking in the Curriculum

1. State of the art business tool.

2. Cost savings in software through site or network licensing.

3. Cost savings in peripherial equipment.

4. Flexibility in using software.

5. Prescriptive and diagnostic uses.

6. Classroom management and administration.

7. Competency-based education.

8. Opportunity for connectability between high school and community college programs.

INTRODUCTORY UNIT OUTLINE

Prerequisite skills should include:

Keyboarding I and II to include Basic Computer Literacy Skills.

I. Introduction to Electronic Communication

A. Basic Skills in Communications

B. Communication Modes

1. Patterns

2. Electronic Procedures

C. Applied Communications

1. Time Management

2. Critical Thinking

3. Decision Making/Prioritizing

4. Problem Solving

5. Composing at Keyboard

6. Communicating with Co-Workers

II. LAN Software Functions

A. Electronic Mail

1. Messages--Brief pieces of text sent directly to user on another workstation. Only works with people on the system at the same time. Features could include a blinking cursor to indicate a message.

2. Memorandums/Business Notes--Can be sent to any user regardless of whether they are currently logged onto the system. Features could include: reply, forward, file, print, cc, or bcc.

3. Documents--Document created by other software programs but mailed via E-Mail software. Features could include: send, forward, reply, and attached comments.

4. Other E-Mail Options (not generic to all packages) include:

a. Screen Saving--"Snapshots)" of the computer's display that can be mailed to another user.

b. Electronic Forms--Ability to create customized forms that can be incorporated into simulated exercises. Forms can be sent to one user for data entry, then forwarded to another user for further processing.

B. Electronic Filing

1. File and retrieve selected documents.

2. Organize and index files in customized and meaningful, labeled configurations.

3. Selective access system for security.

4. Bulletin Board--General or special interest announcements.

C. Electronic Calendars/Scheduling

1. Maintain calendars (print/view).

2. Send automatic reminders ("ticklers").

3. Request meetings via E-Mail (if accepted, calendars are automatically updated.)

4. Schedule meetings with other users (examines calendars of those to be included to find common times.)

5. Tickler file--Automatic reminders.

D. Electronic Conferencing

APPLICATION EXERCISES FOR THE STUDENT

I. Electronic Mail

A. Messages--Suggestions for Message Use

1. Thought for the day.

2. Instructions requiring student response.

3. Notification of meetings.

4. Congratulatory note.

5. Miscellaneous messages in regards to workflow simulation.

B. Memorandums/Business Notes (Suggestion to the teacher: Pair students for this activity.)

•• JOB 1--Input the following memorandum to be sent to your partner via electronic mail.

TO: Partner
FROM:
DATE:
SUBJECT: FBLA Registration Check

Thank you for your check in the amount of $15 for registration for the Future Business Leaders of America Conference.

You may be sure that the conference will be exciting and well worth your time. A list of the events will be sent to you as soon as finalized.

•• JOB 2--Input the following memorandum to be sent to your partner via electronic mail. Read and file partner's response.

TO: Partner
FROM:
DATE:
SUBJECT: FBLA Competition

As Events Chairman, it is my responsibility to schedule all competitors. Please send me a list of the events you plan to compete in.

Please send your list to me no later than 3:00 p.m. today.

Partner will compose an appropriate response.

•• JOB 3--Input the following memorandum as a reply to the response in JOB 2. Send a cc of the memorandum to your instructor, file original, and print.

TO: Partner
FROM:
DATE:
SUBJECT: FBLA Competition

Thank you for the list of events you will be competing in. You are scheduled to go in all events you listed.

You will receive a schedule of the times designated for your competitive event when it is completed.

C. The following documents for these exercises could be input and sent to partner via E-Mail. (JOB's 4, 5, 6)

Suggestions for teacher: Application exercises used to learn word processing can be inputted or retrieved from storage for document transfer via electronic mail.

Use the options of reply, file, print, cc, or bcc in response to partner. Could use message feature, if appropriate.

II. Electronic Filing--Filing exercises need to follow procedures in user's documentation for electronic filing.

A. Examples of Northwest Regional Educational Laboratories OABUS software electronic filing system for Sports Spectrum (South-Western Publishing Company's workflow simulation) are attached (See Appendix D & E). Three levels of filing are used:

1. Cabinets
2. Drawers
3. Folders

III. Electronic Calendaring

•• JOB 7--Select calendar from the menu and schedule yourself for:

• FBLA Competition--Thursday and Friday of the current week.

•• JOB 8--Select calendar from the menu and schedule times of your competitive events as follows:

• Thursday, 9:00 a.m., Typing
2:00 p.m., Marketing

• Friday, 10:00 a.m., Accounting
4:00 p.m., Data Processing

•• JOB 9--Select calendar from the menu and schedule the following:

- Thursday, 12:00 p.m., Luncheon
- Friday, 6:00 p.m., Awards Banquet

*Check own software documentation for scheduling instructions.

IV. Electronic Conferencing--This exercise is designed for the teacher to be the facilitator.

•• JOB 10--Use the note sending function via electronic mail to conference participants.

Suggested Topics:

- Suggested speakers for FBLA.
- Evaluation of FBLA--Competitive events.
- Ideas for improving FBLA.

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APPENDIXES

Selected List of Publications for the Areas of
Office Automation/Telecommunication/Records Administration,
Ergonomics, and Administrative Management

AI EXPERT, 2443 Fillmore Street, Suite 500, San Francisco, CA 94115. Published monthly, subscription $42 U.S.

ADMINISTRATIVE MANAGEMENT, Dalton Communications, Inc., P.O. Box 1149, Dover, NJ 07801-1149. Published monthly, subscription $30 U.S. and Canada.

BUSINESS COMPUTER DIGEST, 2111 National Press Building, Washington, DC 20045. Monthly publication, subscription $119 U.S. and Canada.

BUSINESS COMPUTING, P.O. Box 815, Tulsa, OK 74101. Published monthly, subscription $25 U.S., $28 Canada.

* BUSINESS FACILITIES, P.O. Box 2060, Red Bank, NJ 07701. Published monthly, free to qualified individuals, otherwise $20 U.S.

BUSINESS SOFTWARE, P.O. Box 27975, San Diego, CA 92128. Published monthly, subscription $35.40 U.S., $42.40 Canada.

* BUSINESS SOFTWARE REVIEW, International Computer Programmers, Inc., 9100 Keystone Crossing, Suite 200, Indianapolis, IN 46240. Published monthly, free to qualified individuals.

BYTE, (Small Systems Journal), McGraw-Hill Publishing Co., Inc., P.O. Box 590, Martinsville, NJ 08836. Published monthly, subscription $21 U.S., $23 Canada.

COMMUNICATIONS PRODUCTS & SYSTEMS, P.O. Box 1952, Dover, NJ 07801-9947. Published bimonthly, free to qualified individuals, otherwise $35 U.S. and Canada.

COMMUNICATIONS WEEK, CMP Publications, Inc., 600 Community Drive, Manhassett, NY 11030. Published weekly, free to qualified readers, otherwise $65 U.S. and Canada.

COMPUTER DECISIONS, Hayden Publishing Co., Inc., P.O. Box 1418, Riverton, NY 08077. Published 26 times a year, subscription $35 U.S. and Canada.

COMPUTER PRODUCTS, P.O. Box 1952, Dover, NJ 07801-9947. Published 10 times per year (except July-August), free to qualified individuals, otherwise $10 U.S. and Canada.

* COMPUTER TECHNOLOGY REVIEW, West World Productions Incorporated, 924 Westwood Blvd., Suite 650, Los Angeles, CA 90024-2910. Published 16 times per year (monthly with additional issues in March, January, September, and December), free to qualified individuals, otherwise $50 U.S., $80 Canada.

COMPUTERS & ELECTRONICS, Ziff-Davis Publishing Co., 3460 Wilshire Blvd., Los Angeles, CA 90010. Published monthly, $16.97 U.S., $23.97 Canada.

COMPUTERLAND, 375 Cochituate Road, Box 880, Framingham, MA 01701-9985. Published weekly, $44 U.S., $110 Canada.

* CONCEPTS, Wang Laboratories, Inc., One Industrial Avenue, Lowell, MA 01851. Published quarterly, free to Wang WP/DP equipment users, otherwise $16 annual non-membership subscription.

DATA BASE MONTHLY, Data Base Publications, Inc., P.O. Box 1533, Neptune, NJ 07754. Published monthly, subscription $38 U.S. and Canada.

DATA COMMUNICATIONS, McGraw-Hill, P.O. Box 1508, Neptune, NJ 07754-9977. Published monthly, subscription $30 U.S. and $40 Canada.

DATA MANAGEMENT, DPMA, 505 Busse Highway, Park Ridge, IL 60068-3191. Published monthly, subscription $16 U.S.

DATA TRAINING, Weigarten Publications, 38 Chauncy Street, Boston, MA 02111. Published monthly, subscription $24 U.S.

* DATAMATION, Cahners Publishing Company, 875 Third Avenue, New York, NY 10022. Published twice monthly, free to qualified individuals, otherwise $55 U.S., $75 Canada.

* DEC PROFESSIONAL (THE), Professional Press, Inc., P.O. Box 503, Spring House, PA 19477-0503. Published monthly (except twice in January, March, May, July, September, and November), free to qualified sites in U.S. and Canada.

* DIGITAL NEWS, Digital Equipment Corporation (DEC), P.O. Box 3, Winchester, MA 01890-9966. Published biweekly except last 2 weeks in August and last 2 weeks in December, free to qualified persons.

DIGITAL REVIEW, Ziff-Davis Publishing Co., Fourth Floor, One Park Avenue, New York, NY 10016. Published biweekly, subscription $40 U.S., Canada, and Mexico.

* INFORMATION CENTER, Weingarten Publications, Inc., 38 Chauncy Street, Boston, MA 02111. Published monthly, free to qualified readers in the U.S., $20 Canada.

* INFORMATION MANAGEMENT, 101 Crossways Park West, Woodbury, NY 11797. Published monthly, free to qualified individuals, otherwise $10 U.S., $24 Canada.

* INFORMATION PROCESSING, IBM, Information Systems Group, 1133 Westchester Avenue, White Plains, NY 10604. Published by IBM, free to customers served by the National Accounts Division of the IBM IS group.

* INFORMATION SYSTEMS NEWS, CMP Publications, 333 East Shore Road, Manhassett, NY 11030. Published biweekly, free to qualified management and professional personnel, otherwise $17.50 U.S. and Canada.

* INFORMATIONWEEK, 600 Community Drive, Manhassett, NY 11030. Published weekly, free to qualified management and personnel in the information systems industry, otherwise $65 U.S. and Canada.

* INFOSYSTEMS, Hitchcock Publishing Co., Hitchcock Building, P.O. Box 3007, Wheaton, IL 60189-9933. Published monthly--U.S. readers ask for a free subscription, otherwise subscription rate is $70 U.S., $80 Canada.

* INFOWORLD, P.O. Box 1018, Southeastern, PA 19398-9982. Published weekly except 4 issues in August and a combined issue in December and January, free to qualified individuals, otherwise $100 U.S.

* INSIGHT, Digital Equipment Corporation (DEC), MKO-1/W83 Continental Boulevard, Merrimack, NH 03054. Published monthly, free to qualified individuals.

* INTERFACE, Published by International Computing Corp., 915 River Street, Santa Cruz, CA 95060. Published quarterly, free to qualified individuals, otherwise $10.

JOURNAL OF EDUCATION FOR BUSINESS, Heldref Publications, 4000 Albemarle Street, N.W. Washington, DC 20016. Published monthly October - May, subscription $35 U.S., $42 Canada.

JOURNAL OF INFORMATION SYSTEMS MANAGEMENT, Auerbach, 6560 North Park Drive, Pennsauken, NJ 08109. Published quarterly, subscription $60 U.S. and Canada.

JOURNAL OF MANAGEMENT INFORMATION SYSTEMS, M.E. Sharpe, Inc., 80 Business Park Drive, Armonk, NY 10504. Published quarterly, $35 individual--$75 institution.

JOURNAL OF MICROGRAPHICS, Association for Information and Image Management, 8719 Colesville Road, Silver Spring, MD 20910. Published monthly, free to members of NMA, otherwise $55 U.S.

JOURNAL OF SYSTEMS MANAGEMENT, 24587 Bagley Rd., Cleveland, OH 44183. Published monthly, subscription $17 U.S., $20 Canada, and $8.75 members.

LAN, Local Area network Magazine, 12 West 21 Street, New York, NY 10010. Published monthly, subscription $18 U.S. and $42 Canada.

* LAN TIMES, Novell VP of Communications, 122 East 1700 South, Provo, UT 84601. Published monthly, U.S. free subscription, and $30 Canada (covers mailing costs)

MANAGEMENT COMMUNICATION QUARTERLY, Sage Publications, Inc., P.O. Box 5084 Newbury Park, CA 91359-9924. Published 4 times a year--March, June, September, and December, $28 U.S.

MANAGEMENT WORLD, AMS Building, 2360 Maryland Road, Willow Grove, PA 19090. Published monthly, $18 per year to non-members of AMS. (U.S. and Canada)

MANAGING END USED COMPUTING, Auerbach Publishers Inc., 210 South Street, Boston, MA 02111-9990. Published monthly, $78 U.S.

* MICRO COMMUNICATIONS, Circulation Dept., 500 Howard Street, San Francisco, CA 94105. Published monthly, free to qualified individuals in the U.S., otherwise subscription $22 U.S., $28 Canada.

MICROCOMPUTING, Published by Wayne Green, Inc., 80 Pine Street, Peterborough, NH 03458. Published monthly, $25 a year.

* MICROFILM TECHNIQUES, 250 Fulton Avenue, Hempstead, NY 11550. Published bimonthly, free.

* MINI-MICRO SYSTEMS, Cahners Publishing Co., P.O. Box 5051, Denver, CO 80217-9872. Published monthly, free to qualified individuals, otherwise $65 U.S., $80 Canada.

* MIS WEEK, Circulation Department, P.O. Box 2036, Mahopac, NY 10541. Published weekly, free to qualified individuals, otherwise $50 U.S., $85 Canada.

* NETWORK WORLD, CW Communications, P.O. Box 1021, Southeastern, PA 19398-9979. Published weekly, except for a single combined issue the last two weeks in December. Free to qualified individuals, otherwise annual subscription is $95 U.S., $110 Canada.

* OAST (Office Automation Systems & Technology), P.O. Box OAST, Winter Beach, FL 32971. Published monthly, free to qualified individuals.

* OFFICE (THE), Office Publications, Inc., Attention: Circulation Dept., P.O. Box 1231, Stamford, CT 06904-9970. Monthly publication, free to qualified individuals, otherwise $40 U.S., $70 Canada.

ONLINE ACCESS GUIDE, Online Access Publishing Group, Inc., 5616 W. Cermak Road, Cicero, IL 60650. Published bimonthly, subscription $24.95 U.S., $30.95 Canada.

OFFICE EQUIPMENT AND METHODS, Maclean Hunter Building, 777 Bay Street, Toronto, ON M5W 1A7. Published monthly, subscription $17 U.S., $15 Canada.

* OFFICE SYSTEMS 87, Office Systems Magazine, Inc., P.O. Box 1015, Southeastern, PA 19298. Published monthly, free to qualified individuals, otherwise $36 annual subscription fee.

PATTY SEYBOLD'S NETWORK MONITOR (Newsletter Only), Office Computing Group, 148 State Street, Suite 612, Boston, MA 02109-9990. Published monthly, $595 U.S., $607 Canada.

PATTY SEYBOLD'S OFFICE SYSTEMS REPORT, Office Computing Group, 148 State Street, Suite 612, Boston, MA 02109-9990. Published monthly, $295 U.S., $307 Canada.

PC MAGAZINE, P.O. Box 2445, Boulder, CO 80322. Published biweekly except in July and August (22 issues), $34.97 U.S., $56.97 Canada.

PC PRODUCTS, Cahners Publishing Co., 270 St. Paul Street, Denver, CO 80206. Published monthly, free to qualified individuals, otherwise $35 U.S., $40 Canada.

PC RESOURCE, CW Communications, P.O. Box 950, Farmingdale, NY 11737. Published monthly, introductory subscription $19.97 U.S.

PC WEEK, Ziff-Davis Publishing Co., Circulation Dept., One Park Avenue, 4th Floor, New York, NY 10016. Published weekly except for a single combined issue at year-end. Subscription $120 U.S., $150 Canada.

PC WORLD, Subscription Department, P.O. Box 51833, Boulder, CO 80321-1833. Published monthly, subscription $19.90 U.S., $41.90 Canada.

PERSONAL COMPUTING, P.O. Box 2941, Boulder, CO 80321. Published monthly, subscriptions $18 U.S., $24 Canada.

PORTABLE COMPUTING, Circulation Department, 500 Howard Street, San Francisco, CA 94105. Published monthly, subscription $22 U.S., $28 Canada.

SECRETARY (THE), published by the Professional Secretaries International, 301 East Armour Blvd., Kansas City, MO 64111-1299. Published nine times a year, subscription $12 U.S. and Canada.

* SOFTWARE AGE, 2211 Fordem Avenue, Madison, WI 53701. Monthly publication, free

* SOFTWARE NEWS, Sentry Publishing Co., Circulation Department, P.O. Box 542, Winchester, MA 01890. Published monthly, free to qualified individuals, otherwise $40 U.S., $50 Canada.

* T.H.E. JOURNAL (TECHNOLOGICAL HORIZONS IN EDUCATION), Circulation Department, P.O. Box 15126, Santa Ana, CA 92705-0126. Published monthly, except July and December. Free to qualified individuals in U.S. and Canadian Educational Institutions and Training Departments, otherwise $29.

* TPT (TELECOMMUNICATION PRODUCTS PLUS TECHNOLOGY), PennWell Publishing Co., 1421 s. Sheridan, P.O. Box 21728, Tulsa, OK 74101. Published monthly, free to qualified individuals, otherwise $30 U.S., $50 Canada.

TECH PC JOURNAL, Ziff-Davis Publishing Company, P.O. Box 55747, Boulder, CO 803222-5747. Published semimonthly, introductory 1-year subscription $34.97 U.S.

* TELECOMMUNICATIONS, 685 Canton Street, Norwood, MA 02062. Published monthly, free to qualified individuals, otherwise $40 U.S., $50 Canada.

TELECOMMUNICATIONS ALERT, One Park Avenue, New York, NY 10016. Published monthly, subscription $187 U.S.

TELECONNECT, Telecom Library Inc., 12 West 21 Street, New York, NY 10010. Published monthly. Annual subscription $15 U.S., $55 Canada.

* TODAY'S OFFICE, 645 Stewart Avenue, Garden City, NY 11530. Published monthly, free to qualified officials, otherwise $30 U.S., and $35 Canada.

TRAINING, 731 Hennepin Avenue, Minneapolis, MN 55403. Published monthly, $28 U.S., $31 Canada.

TRAINING WORLD, Woodbury Communications, Inc., 80 North Broadway, Hicksville, NY 10801. Bimonthly publication (except in September when an extra issue is published), subscription $15 per year.

* TYPEWORLD, P.O. Box 395, Dalton, MA 01227-0395. Published biweekly except Christmas and New Year's, free to qualified individuals, otherwise $25 U.S. and Canada.

* VIEWPOINT, IBM Corporation, General Systems Division, P.O. Box 2068, Atlanta, GA 30055. Published bimonthly. Free to qualified individuals.

WORDS, Association of Information Systems Professionals, 1015 North York Road, Willow Grove, PA 19090. Published bimonthly. Subscription $18 per year to non-members of AISP in the U.S. and $35 in Canada.

* FREE

Compiled by:

Bill Mitchell, Professor
Office Automation Consultant
University of Wisconsin-Eau Claire
Eua Claire, WI 54701
(715) 836-4320

llg+VOC10765

LIST OF SIMULATIONS BY PUBLISHERS

South-Western Publishing Company

Sports Spectrum, 1986--Flow of work
Serendipity, Inc., 1975--Flow of work
Means Jeans, 1983--Flow of work
Racquets Unlimited (Word Processing), 1982--Flow of work
Pinetree Fashions, 1982--Flow of work
Monkey-Go-Round, 1985--Flow of work
Greenery, Inc., 1982 (clerk typist)
Westchester Square, Inc., 1983 (secretary)
The Tahoe Times, 1985 (receptionist)
People's Trust of Little Rock, 1978 (receptionist)
Nicholson, Donovan & Brown, 1987 (legal word processing)
Thornton, Crane, and Ashby, 1984 (legal secretary)
Freeman, Rosa, and Arnold, 1977 (legal secretary)
Pediatric Associates, 1987 (medical office)
Northside Medical Center, 1980 (medical office)
Fund Raiser, 1985 (accounting clerk)
Mountain View Office Supplies, Inc., 1977 (accounting clerk)
Aaron Insurance Agency, 1980 (insurance clerk)
The Word Processing Specialist, Info-Tec, 1985
Community National Bank, 1984 (bank teller)
Calculating Machines Simulation, 1983
Dallas Oil, Inc., 1985 (administrative secretary)
The Auditing Clerk, 1982
Acme Electric Company, 1983 (billing clerk)
Plants Galore, 1984 (general clerk)
Zoorific, 1987 (typewriting)
T-Shirt Factory (typewriting)
Volunteer Bicycle Company, 1981 (typewriting)
Wild Water Fun, 1987 (typewriting)
Jeans Generation, Inc., 1982 (typewriting)
Encore Talent Agency, 1987 (typewriting)
The Castaways, 1982 (typewriting)
SunCoast Civic Center, 1987(general office assistant)
TSR Towers, Inc., 1982 (general office assistant)
Gymnastics Unlimited, 1987 (typewriting)
Air Country International, 1981 (typewriting)
Snow Country, 1974 (typewriting)
Tronics, Inc., 1985 (typewriting)
Liberty Television Broadcasting, 1980 (typewriting)
Palmetto Insurance Company, 1984 (correspondence secretary)
Sail Away, 1987 (accounting)
Maxwell Jewelry, 1987 (accounting)
Microwaves, Inc., 1987 (accounting)
Picnic Basket, 1987 (payroll)
Cycle Center, 1982 (accounting)
Fish Tank, 1983 (payroll)
Fire Place, Inc., 1982 (accounting)

Frazier Family, 1977 (family finance simulation)
Professions Accounting, 1977 (accounting)
Hudson Farm, 1977 (accounting)
Strategy, 1986 (accounting)
G & S Hobbyworld, 1983 (accounting)
Film & Flash, 1983 (accounting)
Modern Wheels, 1983 (accounting)
Midtown Electronics, 1983 (accounting)
Strategy, 1986 (accounting/marketing principles)
Gadgetronics, 1985 (retail decision-making)
Strawberry Mall, 1982 (marketing)

Houghton Mifflin

Aqua Clean (accounting)
Lakeshore Computer Center (accounting)
Branigans (accounting)
London & Company (accounting)
Sounds Abound (accounting)
TeleMart, Inc. (accounting)
Dynatech (accounting)
Summit enterprises (recordkeeping)
DataMagic (typewriting)
Sidewalk Surfin (typewriting)
Heritage Park (legal typing)
Harborside (medical typing)
The Odyseey (typewriting and office procedures)
Pleasure Island (typewriting and office procedures)
Berwyn Ice Cream (marketing/management)
Capitol Auditing Service (calculator)

Glencoe Publishing Company

Mini Sims Temporaries (general office)
Triangle Broadcasting, Inc. (word/information processing)
TEXT The Electronic Office (also has sound filmstrips for book)

Gregg/McGraw Hill

Pro-Lawn Service (accounting)
Jeans-Plus (accounting)
Kenna's Carpet (accounting)
Sun-N-Ski, 1978 (accounting)
John Patterson, Attorney, 1986 (accounting)
Ellen Peters, MD, 1986 (medical accounting)
Sight & Sound Electronics, 1986 (accounting)
Town & Country Casuals, 1985 (accounting clerk)
Skeeter's Pizza Parlor, 1984 (accounting)
Enterprise Sandwich Shops, 1983 (marketing)
Donut Franchise, 1984 (management/general business)
Odyssey, Inc., 1977 (general business)

Novel Ideas, 1986 (marketing)
Peanut Butter, 1985 (marketing)
Jeffrey's Department Store, 1978 (marketing)
Emory Restaurant, 1985 (computerized accounting)
Lester Hill Office Simulation, 1979--Flow of work
SnoDrift Ice Cream, 1983 (clerical)
Supersonic Sounds, 1981 (recordkeeping)
Leisuretronics, 1985 (typewriting)
Station KBOE-TV, 1984 (typewriting)
Shadow Mountain Lodge, 1978 (typewriting)
Tower Typing, 1978 (typewriting)
A La Carte Enterprises, 1976--Flow of work (secretarial/clerical)
All Points Relocation Service, 1977 (secretarial)
Mercury Systems, Inc., 1986 (word/information processing)

APPENDIX "C"

COMPUTER ACTIVITIES

- B A N K I N G & F I N A N C E

JOHN MARSHALL HIGH SCHOOL
Portland, Oregon

Prepared by
Cathy Witte
December 10, 1986

TABLE OF CONTENT

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Salary Report	5
Salary Report Student Card	6
Time Card	7
Weekly Grade Sheet	8
Weekly Grade Sheet Sample	9

Date:

Dear *First Name*:

We recently decided to give all employees who have been with Monkey-Go-Round prior to November 1, 1987 a monthly bonus of $50. On the next payroll check, there will be an additional $50 added to your regular salary of $*salary*. Thank you, *first name* for your help in making a finer Monkey-Go-Round.

Yours truly,

Payroll Clerk

COMPANY LETTER: This letter will give the students an opportunity to program a form letter into the computer and to make copies.

1

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M E M O R A N D U M

DATE:

TO:

FROM: Cathy Witte

MEMORANDUMS: This form will be used for assignments and daily expectations. Will also use to call office meetings.

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Date:

Dear Mr./Mrs. *last name*:

Please be advised that *first name* is doing unsatisfactory work in the *class* class. *first name*'s present average in the class is *average*. If you have any further questions about this matter, please contact me. Thank you for your cooperation.

Yours truly,

teacher

PROGRESS LETTER: This letter can be used either by itself or can be sent along with the progress report.

PROGRESS REPORT

NAME:

CLASS: DATE:

IMPROVEMENT NEEDED IN:

_____Turning in assignments

_____Attendance & punctuality

_____Test scores

_____Applying self in class

_____Class participation

COMMENDATIONS:

_____Turns in assignments

_____Excellent attendance

_____Exceptional test scores

_____Applies self in class

_____Is responsible

GRADE AT THIS TIME IS _____

PROGRESS REPORT: This report will be used periodically in order for the students to know exactly where they stand at a given time. This can also be sent to the parent along with a cover letter that I have designed.

SALARY REPORT

WEEK OF 12/1 - 12/5

NAME	MON	TUE	WED	THURS	FRI	TOTAL	SALARY

SALARY REPORT: This spreadsheet will include all students and they will be able to see how they rank in the class as to hours spent, etc.

MONKEY-GO-ROUND

SALARY REPORT

LAST NAME: FIRST NAME:

DATE EMPLOYMENT BEGAN:

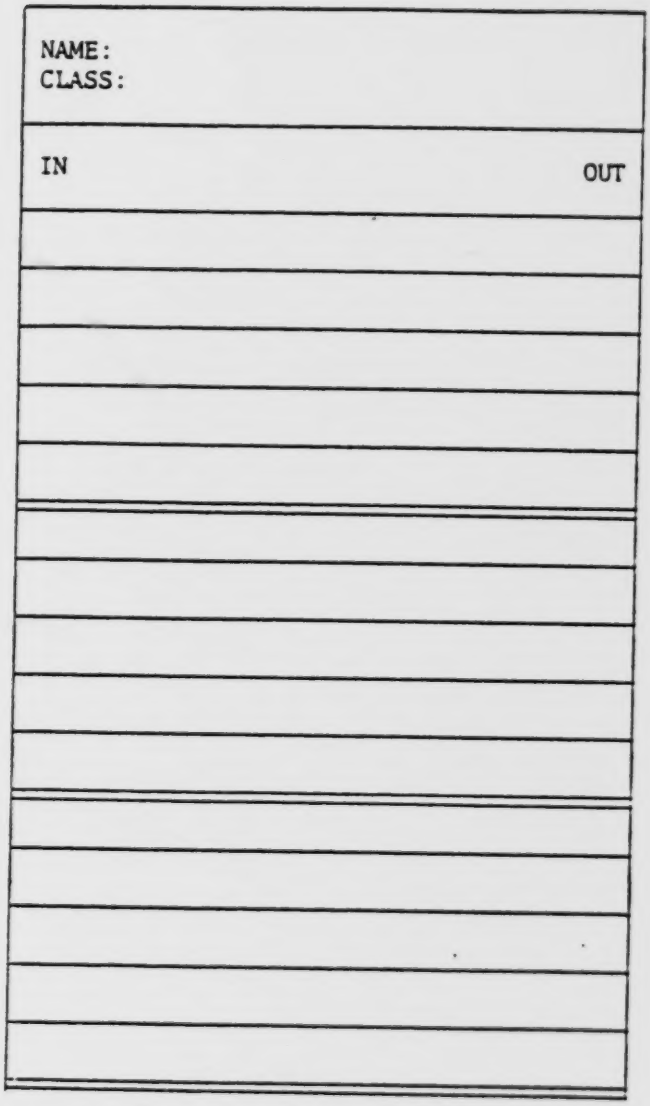
WEEK:

TOTAL HOURS:

SALARY

PAYROLL CLERK:

SALARY REPORT: To be used with each student in Monkey-Go-Round. Will also use in Bank Teller simulation, but will change form.



TIME CARD: To be used in every class for attendance. The "In" column will be used for checking in at the beginning of class or whenever students arrive. The "Out" column will be used when checking out to use the restroom, get a drink, etc. I use this as my tie breaker at the end of the grading period when a student is between, for example, an A or B. If I see that they are checking out frequently, they receive the lower grade. This form is designed to go along with my time clock.

WEEKLY GRADE SHEET

NAMES	MON	TUES	WED	THURS	FRI	TOTAL	AVERAGE

MAXIMUM SCORES

WEEKLY GRADE SHEET: This spreadsheet will give me the total points and the average for each student in the class. When I get into the grading situation, I may need to make some changes.

GRADE SHEET

NAMES	MON	TUES	WED	THURS	FRI	TOTAL	AVG
BILL JAMES	75	63	79	81	45	343	68.6
JANE BROWN	83	97	95	87	91	453	90.6
MARY BLISS	81	75	75	68	81	390	78
AMOS GONE	93	87	79	93	92	444	88.8
MAXIMUM SCORES	93	97	95	93	92	453	90.6

(Weekly Grade Sheet Sample)

APPENDIX "D"

SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	All Sports Spectrum Employees	Executive Director General Manager Administrative Assistant Advertising Manager Sales Manager	Executive Director General Manager Advertising Manager Sales Manager

Drawer

Communications: Advertising

Files

Weekly Newsletter

SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	All Sports Spectrum Employees	All Sports Spectrum Employees	Executive Director General Manager Receptionist Office Clerk 1 Office Clerk 2

Drawer

Communications: General

Files

Accounting Department
Administration
Advertising Department
Charge-Out and Follow-Up Record
Last National Bank
Sales Department
Services, Inc.
Shipping Department
Word Processing Department
Miscellaneous Communications (filed alphabetically)

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SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	All Sports Spectrum Employees	Executive Director General Manager Administrative Assistant Sales Manager Advertising Manager	Executive Director General Manager Sales Manager Advertising Manager

Drawer

Communications: Sales

Files

Sales Letters
Weekly Sales Letter

SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	Executive Director All Sports Spectrum Employees	Executive Director General Manager Administrative Assistant Accountant Accounting Clerk Sales Manager Billing Clerk Shipping Clerk	Executive Director General Manager Administrative Assistant Accountant Accounting Clerk Sales Manager Billing Clerk Shipping Clerk

Drawer

Customers

Files

(Individual file for each of the following 20 customers):

All Season Sports
Athlete's Choice
Beachfront Resort
Boardwalk Sporting Center
Carousel Sports
Davy Jones's Locker
Foot Locker
For the Sun Set
The Good Sport
Jolly Seagull Sports
King Neptune's
Landings' End
Le Vent du Mer
New Harbor Sports
Oceanside Sporting Center
Pier 44 Sports Center
Sand Castle Resort
Sneakers 'n Cleats
Space Center Sports
Sports of All Sorts

(The individual files of the customers will contain correspondence, credit/debit memos, invoices, purchase orders, shipping cards, Statements of Account, etc.).

SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	Executive Director Operations Manager	Executive Director Operations Manager	Executive Director Operations Manager

Drawer

Employees: Administrative
Records

Files

(Individual file for each of the following student participants):

Allen, Stephanie
Barr, Brian
Brockway, Jack
Coulson, Brenda
Cowan, Kristen
Crossen, Michelle
Ekleberry, Kelsey
Elliott, Gerald
Faull, Nancy
Faull, Sherry
Guerra, Delia
Jones, Melissa
Jones, Steve
Lee, Jerry
Martinez, Gricelda
Mays, Tyna
Parker, Corinna
Rogie, David
Stewart, Tammy
Thilavanh, Phougen
Thompson, Felicia
Underwood, Michelle
Yeung, Wan

(Individual files will contain Job Performance Appraisals and other confidential participant informatio

SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	Executive Director General Manager Accountant Accounting Clerk	Executive Director General Manager Accountant Accounting Clerk	Executive Director General Manager Accountant Accounting Clerk

Drawer

Employees: Payroll Records

Files

Employees Earnings Record for Quarter
Payroll Register
Time Cards/Buyers
Time Cards/Sports Spectrum
Time Cards/Suppliers

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SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	Executive Director General Manager	Executive Director General Manager	Executive Director General Manager

Drawer

Employees: Personnel Records

Files

(Individual file for each of the following student participants):

Allen, Stephanie
Barr, Brian
Brockway, Jack
Coulson, Brenda
Cowan, Kristen
Crossen, Michelle
Ekleberry, Kelsey
Elliott, Gerald
Faull, Nancy
Faull, Sherry
Guerra, Delia
Jones, Melissa
Jones, Steve
Lee, Jerry
Martinez, Gricelda
Mays, Tyna
Parker, Corinna
Rogie, David
Stewart, Tammy
Thilavanh, Phougen
Thompson, Felicia
Underwood, Michelle
Yeung, Wan

(Individual files will include correspondence, job application, job inquiries, notifications, W-4 form, etc.).

SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	Executive Director General Manager Administrative Assistant Accountant Accounting Clerk	Executive Director General Manager Administrative Assistant Accountant Accounting Clerk	Executive Director General Manager Administrative Assistant Accountant Accounting Clerk

Drawer

Records: Accounting

Files

Accounts Payable Ledger Cards
Accounts Receivable Ledger Cards
Cash Receipts Journal
Credit/Debit Log
Credit/Debit Memos
Credit/Debit Memo Register
Daily Credit Report
Financial Statements
Sales Journal
Statements of Account--Received (filed alphabetically)
Statements of Account--Sent (filed alphabetically)

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SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	Executive Director General Manager Administrative Assistant Accountant Accounting Clerk	Executive Director General Manager Accountant Accounting Clerk	Executive Director General Manager Accountant Accounting Clerk

Drawer

Records: Banking

Files

Bank Statements
Bank Statements--Reconciled
Cancelled Checks
Checkbook Register
Deposits

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SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	Executive Director	Executive Director	Executive Director
	General Manager	General Manager	General Manager
	Administrative Assistant	Administrative Assistant	Administrative Assistant
	Accountant	Accountant	Sales Manager
	Sales Manager	Sales Manager	
	Shipping Clerk	Shipping Clerk	
	Banker	Banker	
	Services, Inc. Representative	Services Representative	
	Supplier 1	Supplier 1	
	Supplier 2	Supplier 2	
	Buyer 1	Buyer 1	
	Buyer 2	Buyer 2	
	Buyer 3	Buyer 3	
	Buyer 4	Buyer 4	
	Buyer 5	Buyer 5	
	Buyer 6	Buyer 6	

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Drawer

Records: Departmental

Files

Daily Progress Report

SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	All Sports Spectrum Employees	Executive Director	Executive Director General Manager Receptionist

Drawer

Records: Directory/Job Descriptions

Files

Buyers (Customer's) Directory/
  Job Description
Executive Director Job Description
Last National Bank Directory/
  Banker's Job Description
Operations Manager Job Description
Services, Inc. Directory/
  Representative Job Description
Sports Spectrum Directory/
  Job Descriptions
Supplier's Directory/
  Job Description

SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	All Sports Spectrum Employees	Executive Director General Manager Accountant Accounting Clerk Sales Manager Billing Clerk Shipping Clerk	Executive Director General Manager Accountant Accounting Clerk Sales Manager Billing Clerk Shipping Clerk

Drawer

Records: Orders Placed

Files

Purchase Order Log
Purchase Orders
Supplies Price List
Supplies Requisition

SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	All Sports Spectrum Employees	Executive Director General Manager Accountant Accounting Clerk Sales Manager Billing Clerk Shipping Clerk	Executive Director General Manager Accountant Accounting Clerk Sales Manager Billing Clerk Shipping Clerk

Drawer

Records: Orders Received

Files

Inventory Card
Invoice Log
Invoices: Current (filed alphabetically by Customer's name)
Invoices: Paid (filed alphabetically by Customer's name)
Orders in Process
Packing Slips
Shipping Cards
Telephone Orders

SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	Executive Director General Manager Administrative Assistant Correspondence Specialist 1 Correspondence Specialist 2	Executive Director General Manager Administrative Assistant Correspondence Specialist 1 Correspondence Specialist 2	Executive Director General Manager Administrative Assistant Correspondence Specialist 1 Correspondence Specialist 2

Drawer

Records: Word Processing

Files

Quality Control Report
Word Processing Log

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SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	All Sports Spectrum Employees	All Sports Spectrum Employees	Executive Director General Manager Administrative Assistant Receptionist

Drawer

Records: Miscellaneous

Files

Correspondence Error Report
Mail Log
Telephone Log: Services, Inc.
Telephone Log: Sports Spectrum

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SPORTS SPECTRUM ELECTRONIC FILES

Cabinet	Read Access	Write Access	Append Access
Sports Spectrum	Executive Director All Sports Spectrum Employees	Executive Director General Manager Administrative Assistant Accountant Accounting Clerk Sales Manager Billing Clerk Shipping Clerk	Executive Director General Manager Administrative Assistant Accountant Accounting Clerk Sales Manager Billing Clerk Shipping Clerk

Drawer

Suppliers

Files

(Individual file for each of the following six Suppliers)

All-Pro Golf
Mountain Fabrics
Olympic Shoe Company
Racquets Unlimited
Volunteer Bicycle Company
Woodland Manufacturing Co.

(Individual Suppliers file will include correspondence, credit/debit memos, copies of invoices sent, purchase orders, Statements of Account, etc.)

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Cabinet	Read Access	Write Access	Append Access
Customers	Operations Manager Buyer 1 Buyer 2 Buyer 3 Buyer 4 Buyer 5 Buyer 6	Operations Manager Buyer 1 Buyer 2 Buyer 3 Buyer 4 Buyer 5 Buyer 6	Operations Manager Buyer 1 Buyer 2 Buyer 3 Buyer 4 Buyer 5 Buyer 6

(Depending upon how many students are involved in the simulation, a Buyer might be responsible for 3-5 different customers. Therefore, the above "access" categories were left flexible).

Drawer

Customers

Files

(Includes individual file for each of the 20 Customers--to be filed with the most current on top).

All Season Sports
Athlete's Choice
Beachfront Resort
Boardwalk Sporting Center
Carousel Sports
Davy Jones's Locker
Foot Locker
For the Sun Set
The Good Sport
Jolly Seagull Sports
King Neptune's
Landings' End
Last National Bank
Le Vent du Mer
New Harbor Sports
Oceanside Sporting Center
Pier 44 Sports Center
Sand Castle Resort
Services, Inc.
Sneakers 'n Cleats
Space Center Sports
Sports of All Sorts
Sports Spectrum
General Correspondence

(Individual files will include invoices received, copies of purchase orders Control Log, telephone orders, Statements of Account, shipping cards, debit credit memos, packing slips, bank statements reconciled, deposit records, records of cash received and paid, cancelled checks, correspondence, Checki Account Summary Sheet, Check Book Register, etc.).

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Cabinet	Read Access	Write Access	Append Access
Last National Bank	Operations Manager Banker	Operations Manager Banker	Operations Manager Banker

Drawer

Clients

Files

Business Accounts:

All-Pro Golf
All Season Sports
Athlete's Choice
Beachfront Resort
Boardwalk Sporting Center
Carousel Sports
Davy Jones's Locker
Foot Locker
For the Sun Set
The Good Sport
Jolly Seagull Sports
King Neptune's
Landings' End
Le Vent du Mer
Mountain Fabrics
New Harbor Sports
Oceanside Sporting Center
Olympic Shoe Company
Pier 44 Sports Center
Racquets Unlimited
Sand Castle Resort
Services, Inc.
Sneakers 'n Cleats
Space Center Sports
Sports of All Sorts
Sports Spectrum
Volunteer Bicycle Company
Woodland Manufacturing Co.

Files (Last National Bank continued)

Personal Accounts:

Allen, Stephanie
Barr, Brian
Brockway, Jack
Coulson, Brenda
Cowan, Kristen
Crossen, Michelle
Ekleberry, Kelsey
Elliott, Gerald
Faull, Nancy
Faull, Sherry
Guerra, Delia
Jones, Melissa
Jones, Steve
Lee, Jerry
Martinez, Gricelda
Mays, Tyna
Parker, Corinna
Rogie, David
Stewart, Tammy
Thilavanh, Phougen
Thompson, Felicia
Underwood, Michelle
Yeung, Wan

(Files will contain correspondence, copies of bank statements, copies of deposit slips, checks, copies o
Bank Account Summary Sheet, etc.).

Cabinet	Read Access	Write Access	Append Access
Services, Inc.	Operations Manager Services, Inc. Representative	Operations Manager Services, Inc. Representative	Operations Manager Services, Inc. Representative

Drawer

Businesses

Files

All-Pro Golf
All Season Sports
Athlete's Choice
Beachfront Resort
Boardwalk Sporting Center
Carousel Sports
Davy Jones's Locker
Foot Locker
For the Sun Set
The Good Sport
Jolly Seagull Sports
King Neptune's
Landings' End
Last National Bank
Le Vent du Mer
Mountain Fabrics
New Harbor Sports
Oceanside Sporting Center
Olympic Shoe Company
Pier 44 Sports Center
Racquets Unlimited
Sand Castle Resort
Sneakers 'n Cleats
Space Center Sports
Sports of All Sorts
Sports Spectrum
Telephone Log--Services, Inc.
Volunteer Bicycle Company
Woodland Manufacturing Co.
General Correspondence (filed alphabetically)

(The file will contain invoices, bank statements reconciled, bank statements, correspondence, etc.).

Cabinet	Read Access	Write Access	Append Access
Suppliers	Operations Manager Supplier 1 Supplier 2	Operations Manager Supplier 1 Supplier 2	Operations Manager Supplier 1 Supplier 2

(Depending upon how many students are involved in the simulation, a Supplier might be responsible for either three or six different companies. Therefore, the above "access" categories were left flexible)

Drawer

Suppliers

Files

(Includes an individual file for each of the six Suppliers--to be filed with most recent on top).

All-Pro Golf
Last National Bank
Mountain Fabrics
Olympic Shoe Company
Racquets Unlimited
Services, Inc.
Sports Spectrum
Volunteer Bicycle Company
Woodland Manufacturing Co.
General Correspondence

(Individual files will contain copies of invoices sent, purchase orders received, debit/credit memos, packing slips, Checking Account Summary Sheets, bank statements, reconciled bank statements, deposit records, records of cash received and paid, cancelled checks, correspondence, Checkbook Register, Cont Log, telephone orders, etc.).

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Sports Spectrum Work and Communication Flow

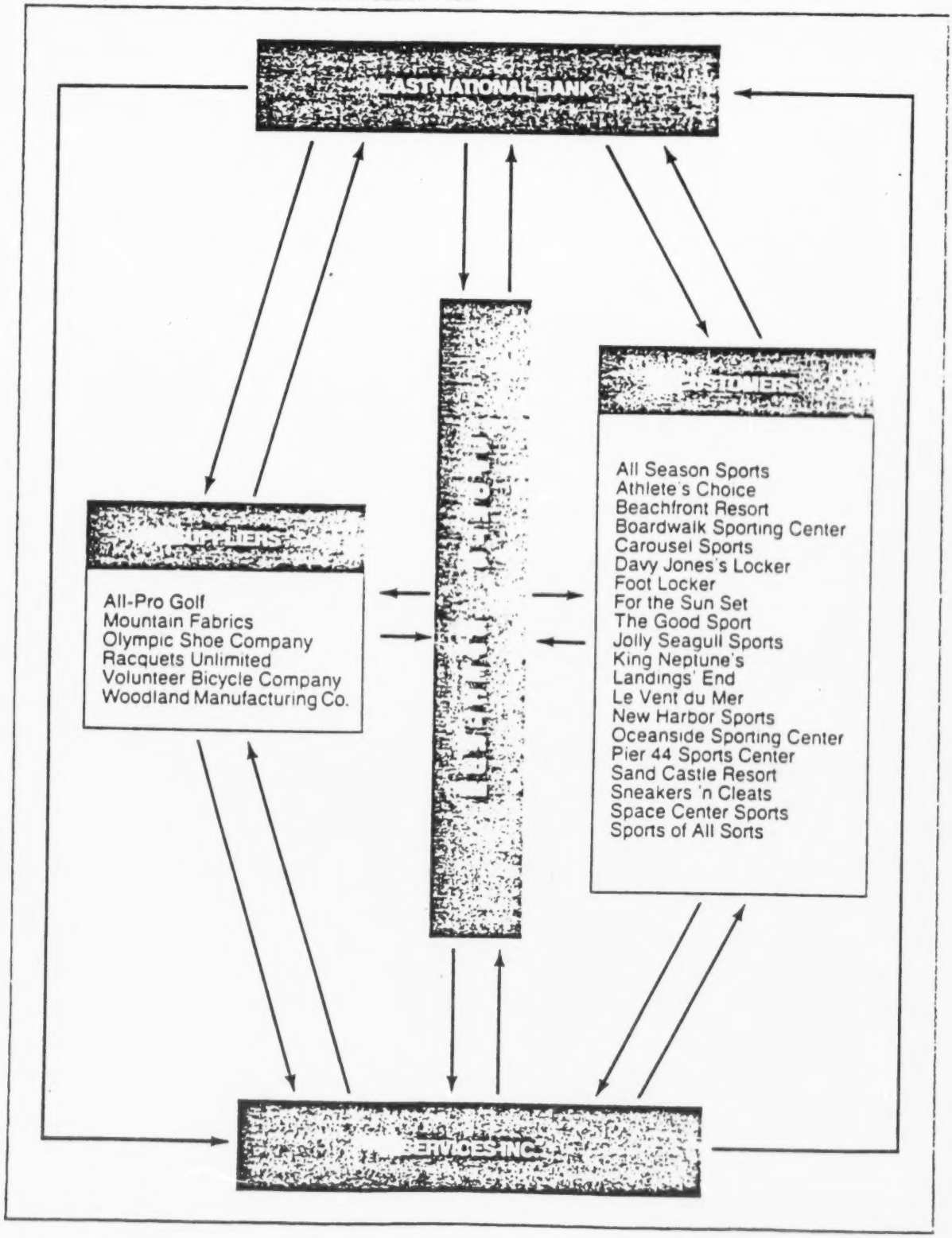

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Chart A Chain of Command for Businesses Other Than Sports Spectrum

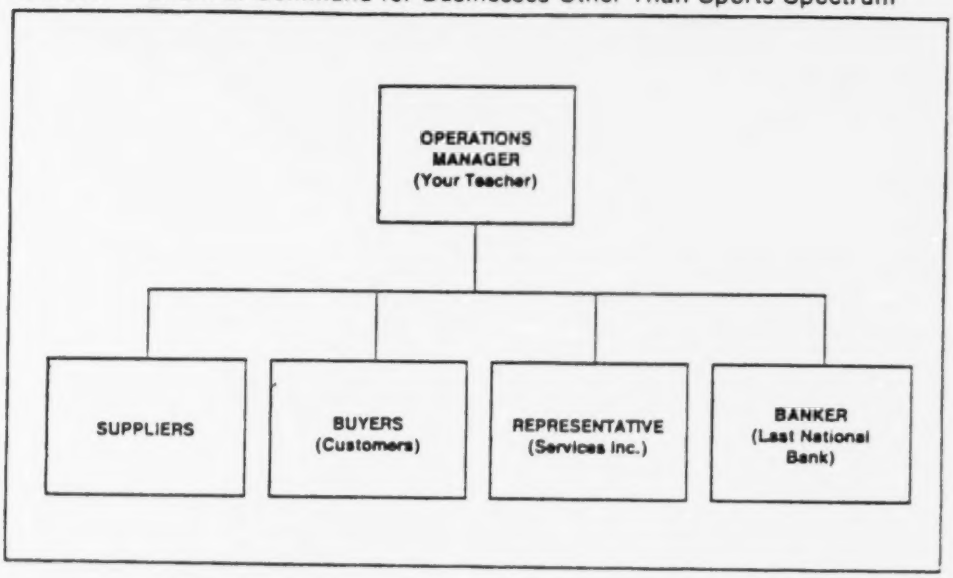
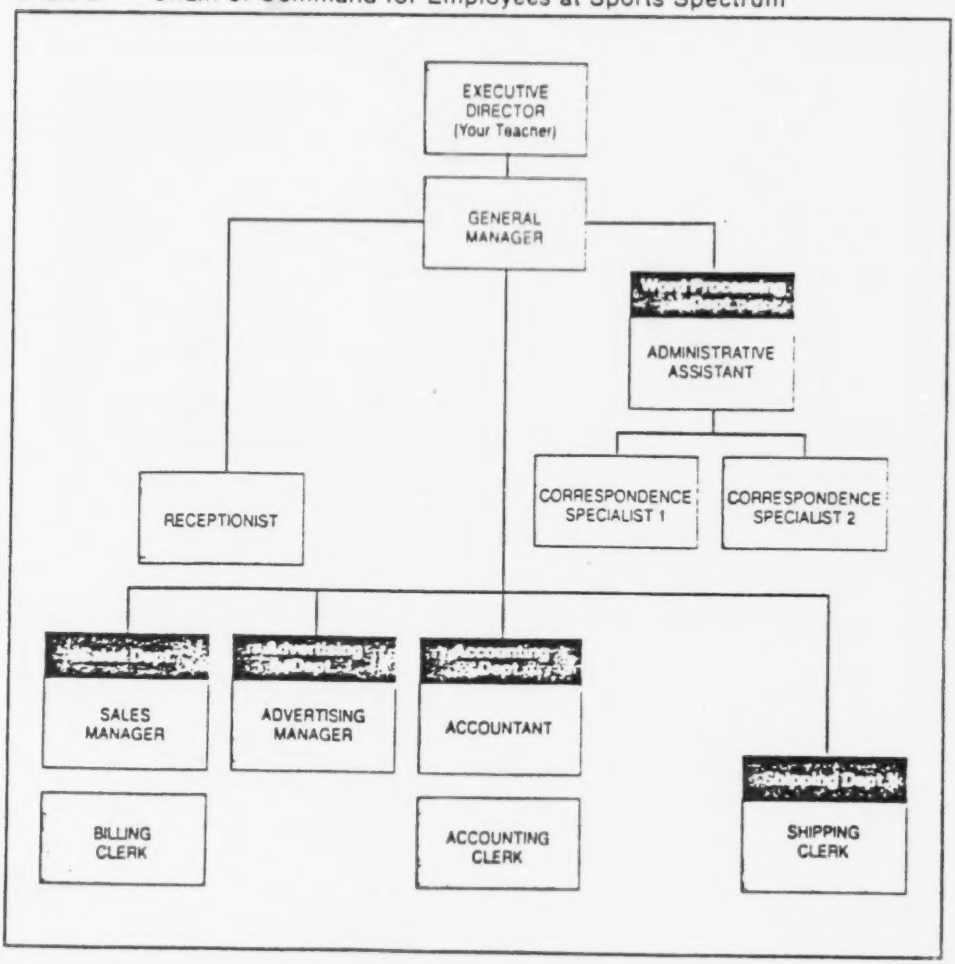
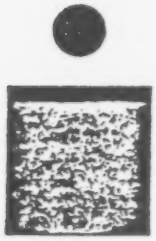


Chart B Chain of Command for Employees at Sports Spectrum





Sports Spectrum Positions

- receptionist
- general manager
- sales manager
- billing clerk
- shipping clerk
- accountant
- accounting clerk
- advertising manager
- administrative assistant
- correspondence specialist 1
- correspondence specialist 2

Buyer Positions

- buyer 1
- buyer 2
- buyer 3
- buyer 4
- buyer 5
- buyer 6

Supplier Positions

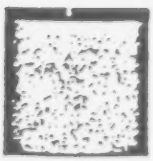
- supplier 1
- supplier 2

Last National Bank Position

- banker

Services Inc. Position

- representative



PART 4
REFERENCE SECTION

SECTION A: SIMULATION DIRECTORY

Sports Spectrum
Rainbow Circle
Daytona Beach, FL 32014-0143
(904) 478-1113

Services Inc.
3226 Volusia Avenue
Daytona Beach, FL 32014-1003
(904) 665-0111

Last National Bank
3224 Volusia Avenue
Daytona Beach, FL 32014-1014
(904) 681-2102

Suppliers

All-Pro Golf
5709 Fairway Drive
Cincinnati, OH 45245-0885
(513) 956-5985

Mountain Fabrics
10 Hidden Valley Road
Independence, MO 64054-3446
(816) 454-2369

Olympic Shoe Company
5101 Fleetwood Avenue
Detroit, MI 48225-2216
(313) 285-4903

Racquets Unlimited
1240 High Street
Auburn, CA 95603-4204
(916) 823-4610

Volunteer Bicycle Company
Old Hickory Boulevard
Nashville, TN 37214-5701
(615) 342-1190

Woodland Manufacturing Co.
377 Woodland Avenue
Lancaster, PA 17602-2066
(717) 225-1560

Buyers

(CUSTOMERS)

All Season Sports
1358 College Plaza
New Haven, CT 06510-9660
(203) 678-9806

Athlete's Choice
9812 North Shore Road
Norfolk, VA 23505-2673
(804) 505-6798

Beachfront Resort
1112 Beachfront Drive
Ocean View, DE 19970-2810
(302) 411-5609

Boardwalk Sporting Center
One Oceanic Terrace
Atlantic City, NJ 08401-4686
(609) 401-2468

Carousel Sports
899 Osceola Avenue, South
Orlando, FL 32801-1873
(305) 443-4598

Davy Jones's Locker
602 Bay View Vista
Annapolis, MD 21401-3302
(301) 546-2301

Foot Locker
200 Gateway Walk
Charleston, SC 29401-0176
(803) 856-4072

For the Sun Set
810 Sunset Drive
Myrtle Beach, SC 29577-5731
(803) 549-4098

The Good Sport
581 Hideaway Harbor Road
Galveston, TX 77550-2273
(409) 403-2330

Jolly Seagull Sports
Trails End
Virginia Beach, VA 23462-7494
(804) 493-4443

King Neptune's
5709 Edgewater Gulf Drive
Panama City, FL 32401-4474
(904) 344-7031

Landings' End
864 Stony Brook Road
Boston, MA 02130-3695
(617) 335-2145

Le Vent du Mer
2199 Bayou Road
New Orleans, LA 70116-8877
(504) 576-2005

New Harbor Sports
1566 Windy Gate Road
Baltimore, MD 21204-8251
(301) 124-3099

Oceanside Sporting Center
423 North Main
Morehead City, NC 28557-7615
(919) 628-2373

Pier 44 Sports Center
1400 East Pelican Drive
Mobile, AL 36605-0020
(205) 688-1453

Sand Castle Resort
4589 Seaside Boulevard
Brunswick, GA 31520-2813
(912) 493-4097

Sneakers 'n Cleats
26 Runners' Alley
Dover, DE 19901-7458
(302) 988-5648

Space Center Sports
211 Space Park Drive
Houston, TX 77058-6712
(713) 798-0877

Sports of All Sorts
2001 South Shore Drive
Biloxi, MS 39532-1938
(601) 499-1000

PROPOSED OA BUS (OR DEC ALL-IN-ONE) PILOT

SPORTS SPECTRUM Flow-of-Work Simulation

Presented by

Fayth Simantel
Mary Walter

Rex Putnam High School

December 1, 1986

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PROPOSED OA BUS (OR DEC ALL-IN-ONE) PILOT

Using SPORTS SPECTRUM Flow-of-Work Simulation at Rex Putnam High School

INTRODUCTION

Rex Putnam High School proposes to integrate the components of the OA BUS (or DEC All-In-One) software into South-Western's flow-of-work business simulation known as SPORTS SPECTRUM. We propose to implement this pilot into two separate classes—Electronic Office (12 students) and Advanced Shorthand (5 students) during the last 9-10 weeks of the current school year. These classes both use the same classroom and equipment, but at different times during the day. We propose to use one class as the "outside world" (consisting of Suppliers, Customers, Bank and Services, Inc.) and the other class to operate Sports Spectrum. This separation of classes and times will allow a more realistic business setting as well as to fully utilize the electronic mail system. (See Chart A on page 5)

All of these students will have the appropriate skills, knowledge, and experiences to successfully operate this simulation, using an electronic mail system. These pre-simulation skills include: Keyboarding, word processing, machine transcription, 10-key calculator, filing, business record keeping on a computer, general office procedures, and strong buaic English and proofreading instruction; some have had one or two years of accounting and, of course, the advanced shorthand students have had two full years of shorthand as well. As Sports Spectrum is designed as a capstone educational experience, students are given an opportunity to apply their previously learned skills and knowledge in a realistic business setting.

OUTLINE OF THE SIMULATION

The simulation is composed of several businesses: Sports Spectrum is a sporting goods distributor; manufacturing companies (Suppliers) that provide Sports Spectrum with manufactured goods; retail sporting goods stores and resort pro shops (Buyers) that purchase merchandise from Sports Spectrum; Last National Bank, which provides

banking services for all business in the simulation; and Services, Inc., which provides basic utility services. Suppliers, buyers, Last National Bank and Services, Inc. initiate the letters, forms and communications that serve as the basis for the work processed by Sports Spectrum's office employees. Because work flows into and out of the Sports Spectrum office, between one workstation and another, and among the various "outside" businesses, this type of simulation requires a great deal of human relations skill and calls for much interaction among simulation participants. Students will experience the pressures and pleasures of realistic interaction with co-workers (much of this interaction can be done electronically) and will learn to handle an assigned work load, to follow instructions outlined in procedures manuals; they will also be required to set priorities, make decisions and deal with the results of those decisions.

STUDENT OBJECTIVES AND TASKS

In the area of human relations, students should learn to:

1. Meet and work with other people.
2. Depend upon others to help get work done.
3. Appreciate the individual qualities of their co-workers.
4. Understand the need for interaction between employees in a business.
5. Develop an appreciation for the problems of management.
6. Understand the importance of responsibility, loyalty, dependability, attendance, cooperation, and initiative.
7. Work as a team with one or more co-workers.
8. Do their work efficiently and accurately so others can depend on them.
9. Interact with others and recognize individual differences.

In the area of acquiring and enhancing job skills, students may perform the following tasks:

* type/keyboard
* file
* find errors
* handle corrections
* make decisions
* keyboard from letters with variables
* proofread
* dictate/transcribe documents
* communicate orally, electronically, and in writing (hard copy)
* initiate and receive information and messages through electronic mail system
* handle angry customers
* set up files
* read flowcharts
* extend, total, and discount
* use judgment
* reconcile bank statements
* handle frustration
* process documents using text-editing equipment
* prepare various kinds of reports
* process letters, order blanks, and other business documents and forms
* read and follow written instructions
* establish priorities
* complete and process invoices and purchase orders
* compose business letters & memos
* receive constructive criticism
* maintain a checkbook
* maintain an inventory

SPORTS SPECTRUM WORK AND COMMUNICATION FLOW (See page 4)

CHART A - CHAIN OF COMMAND FOR EMPLOYEES (See page 5)

Sports Spectrum Work and Communication Flow

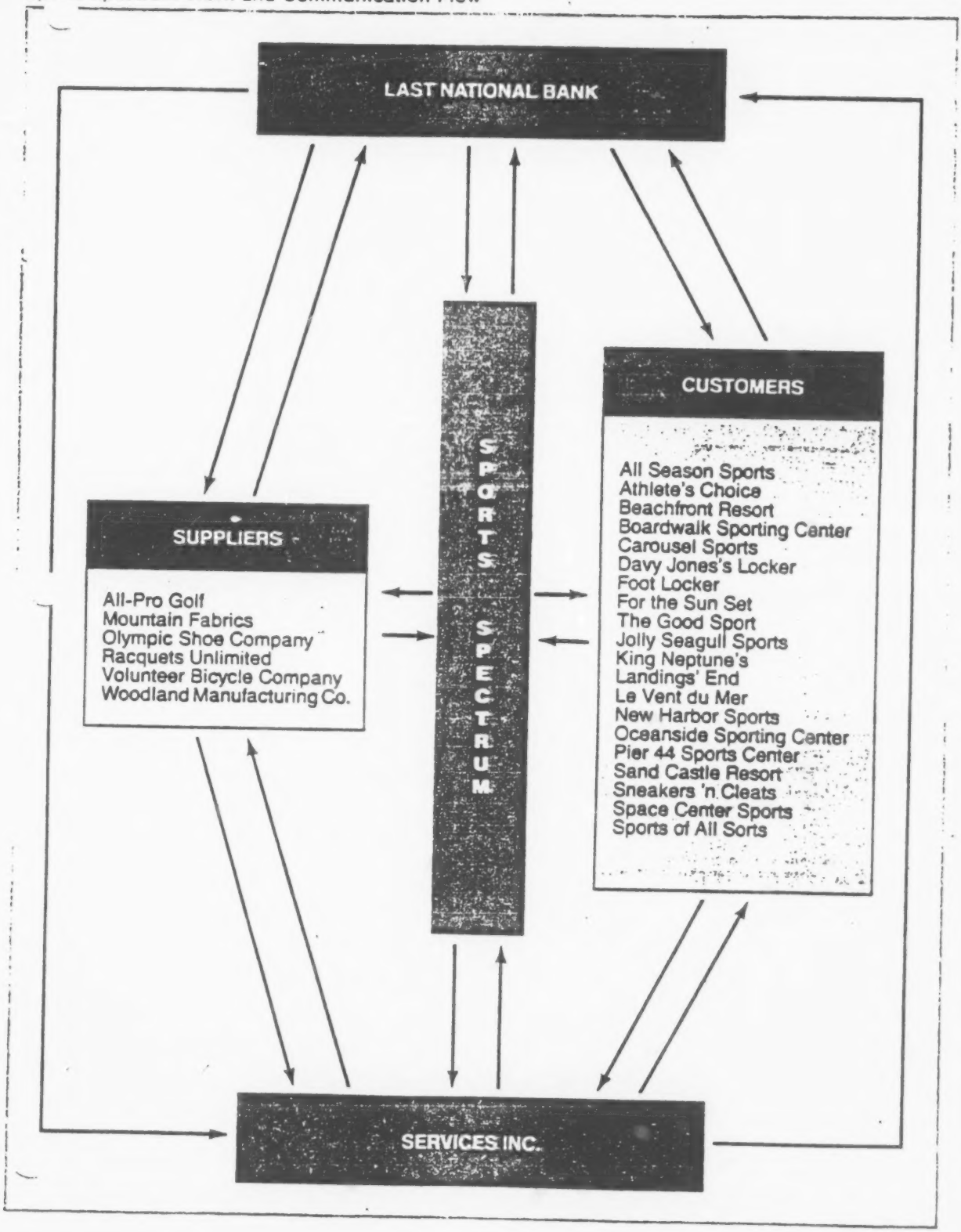
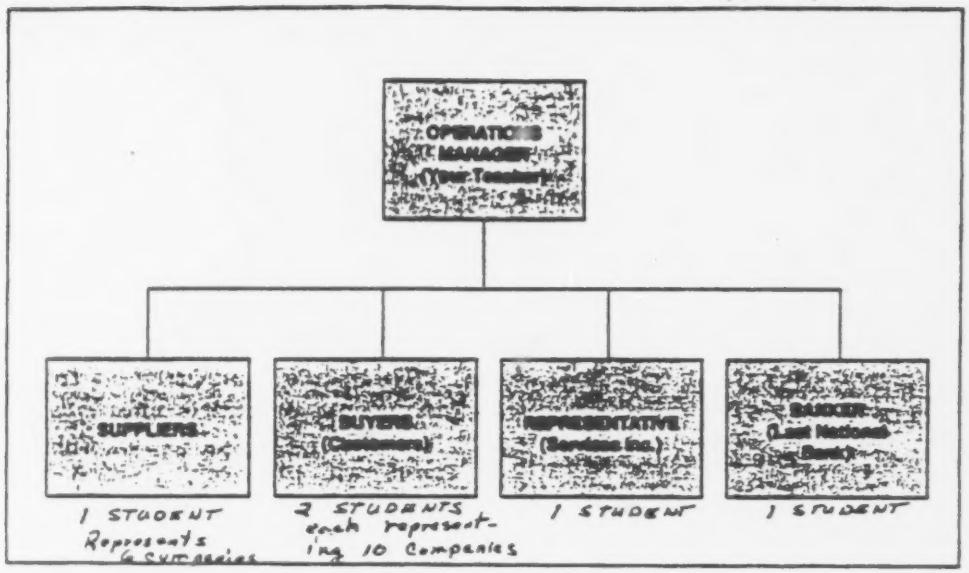
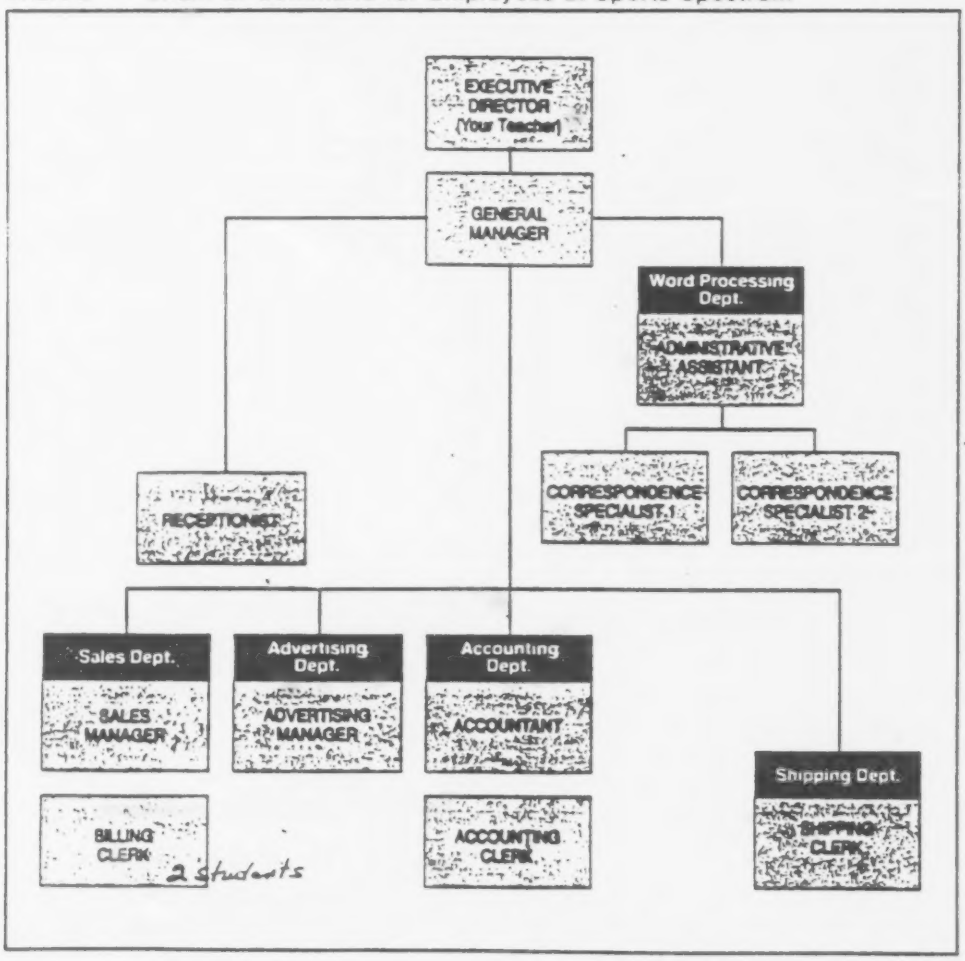


Chart A Chain of Command for Businesses Other Than Sports Spectrum



Advanced Shorthand Students (5)

Chart B Chain of Command for Employees at Sports Spectrum



Electronic Office Students (12)

POSSIBLE IMPLEMENTATION OF OA BUS COMPONENTS INTO EACH SIMULATION POSITION

Everyone in the simulation sends and receives mail. Some will need to be in hard-py form and will be generated by the Word Processing Department. All daily telephone communication necessary to keep the simulation operating smoothly and accurately can be accomplished using the Electronic Mail System. This will give every student ample opportunity to use E Mail. Following is a brief description of the primary responsibilities for each position with an "X" indicating which OA BUS components could be implemented into this simulation:

JOB RESPONSIBILITIES	NOTES	MESSAGE	CALENDAR/SCHED.	CONFERENCE	ELECT.FORM
BUYER - Initiating and responding to correspondence; placing, receiving, verifying, and paying for orders and keeping records. Requires good letter-composition skills and attention to detail.	X	X			X
SUPPLIER - Initiating and responding to correspondence, filling orders, and maintaining records.	X	X			
LAST NATIONAL BANK - Accept deposits and keep records of all bank customers' accounts. Also responsible for preparing periodic bank statements. Requires good math and clerical skills and ability to use a calculator.	X	X			
SERVICES, INC. - Serves as the post office, the utility company, and an office supply store. Wide variety of activities. Attendance critical factor.	X	X			
RECEPTIONIST - Maintaining files, processing incoming and outgoing mail, and greeting visitors. Good human relations skills, office skills, and ability to communicate orally.	X	X			
GENERAL MANAGER - Supervises all office activities, makes management decisions, originates documents, handles customer credit problems. Supervises SS staff and maintains harmony within office. Leadership & communication skills are a must.	X	X	X	X	X

JOB RESPONSIBILITIES	NOTES	MESSAGE	CALENDAR/SCHED.	CONFERENCE	ELECT.FORM
SALES MANAGER - Verifying customer orders, preparing invoices, and supervising billing clerk. Accurate keyboarding and proofreading skills are needed.	X	X	X		X
BILLING CLERK - Verifying customer orders and preparing invoices. Accurate keyboarding and proofreading skills required.	X	X			
ACCOUNTANT - Processing invoices, keeping accounts receivable records, keeping journals and registers, keeping SS checkbook and supervising the accounting clerk. Background in accounting or record keeping needed.	X	X	X		
ACCOUNTING CLERK - Preparing the payroll, statements of account, compiling daily credit report, and assisting the accountant. Accounting or record keeping skills desirable.	X	X	X		
SHIPPING CLERK - Keeping accurate inventory records, shipping merchandise to customers, and preparing purchase orders.	X	X			X
ADMINISTRATIVE ASSISTANT - Serves as aide to general manager and shares some of the GM's responsibilities. Is also in charge of the Word Precessing Dept. Should be able to delegate work and see that it is completed accurately and on time. Management skills are required; good keyboarding and proofreading skills are essential.	X	X	X	X	X
CORRESPONDENCE SPECIALISTS 1 & 2 - Transcribing a variety of documents using text-editing equipment. Good keyboarding, proofreading, and machine transcription skills are a must.	X	X			
ADVERTISING MANAGER - Responsible for all advertising activities at SS. Handles correspondence about adv. policies, composes a weekly newsletter, etc. Creativity and good writing skills are essential.	X	X	X	X	X

NOTES: As the pilot is implemented and the teacher becomes more familiar with the simulation and the E Mail system, there will undoubtedly be additional OA BUS applications that could be included and/or enhanced. What is checked here is based on a fairly cursory examination of this simulation and a somewhat limited knowledge of the scope of the Electronic Mail System.

IDEAS FOR THE FUTURE

As the Advanced Business Program in North Clackamas School District moves from three separate high schools to a central location at the Skill Center in 1987-88, possibilities for enhancement, expansion and integration of a capstone business training simulation of this type increases.

1. The simulation could be expanded to a full semester (two-hour daily block) with students rotating into several different positions.

2. Pre-simulation activities could include accepting applications for employment from all advanced business cluster programs (marketing/ management, accounting, data processing, etc.) as well as those enrolled in a clerical/secretarial program.

3. Pre-simulation activities could include extensive testing, interviewing, etc. to provide students with realistic experience in these important areas and perhaps assist them in determining their relative skill levels.

4. A thorough unit in job search, job application, resume writing, and self-evaluation could be included.

5. Hold a Buyers' Market (Convention) at the end of the simulation. (Details of this event in SS Manual)

6. Conduct tours of Sports Spectrum, bringing students from other classes through the company.

7. Hold an Open House, inviting administrators, counselors, other faculty members, parents, and businesspersons to visit the simulation.

8. Videotape the simulation in action or make a slide/tape presentation. Show to everyone!

9. Create a physical environment that is more like that of a well-run, efficient business office than a classroom setting.

10. Have a seminar on proper dress for the office. Encourage students to dress appropriately--if not every day--on special days of the simulation.